NOT MEASUREMENT SENSITIVE

MIL-STD-40051-3

DEPARTMENT OF DEFENSE STANDARD PRACTICE

TECHNICAL MANUALS

OPERATOR INSTRUCTIONS



CONTENTS

PARAGRAPH PAG			<u>GE</u>		
1.	SCOPE		1		
1.	1.1	Scope			
	1.1	Зсоре	1		
2.	APPLICA	ABLE DOCUMENTS	1		
3.	DEFINIT	IONS	1		
4.	GENERAL REQUIREMENTS				
	4.1	General			
	4.2	Standard tables			
	4.3	Preparation of digital data for electronic delivery			
	4.3.1	Use of the DTDs / FOSIs			
	4.4	Content structure and format			
	4.5	Style and format			
	4.5	Work package development			
	4.0				
	4.7	Safety devices and interlocks			
		Electrostatic Discharge (ESD) sensitive parts			
	4.9	Nuclear hardness			
	4.10	Selective application and tailoring	2		
5.	DETAILI	DETAILED REQUIREMENTS			
	5.1	Preparation of operator instructions			
	5.1.1	Description and use of controls and indicators work package			
	5.1.2	Operation under usual conditions work package			
	5.1.2.1	Initial setup information			
	5.1.2.2	Siting requirements			
	5.1.2.3	Shelter requirements			
	5.1.2.4	Assembly and preparation for use			
	5.1.2.5	Initial adjustments, before use, and self-test			
	5.1.2.6	· ·			
	5.1.2.6.1	Operating procedures			
	5.1.2.6.2	Operating procedure considerations			
		Summary operating procedures			
	5.1.2.6.3	Decals and instruction plates			
	5.1.2.7	Operating auxiliary equipment			
	5.1.2.8	Preparation for movement			
	5.1.3	Operation under unusual conditions work package			
	5.1.3.1	Initial setup information			
	5.1.3.2	Unusual environment / weather			
	5.1.3.3	Fording and swimming			
	5.1.3.4	Interim Nuclear, Biological, and Chemical (NBC) decontamination procedures			
	5.1.3.5	Jamming and Electronic Countermeasures (ECM) procedures	8		
	5.1.3.6	Emergency procedures	8		
6.	NOTES		9		

CONTENTS

<u>PARAGRAPH</u>	<u>PAGE</u>
FIGURE	
1.	Example of an operator's controls and indicators work package
2.	Example of an operation under usual conditions work package
3.	Example of an operation under unusual conditions work package
INDEV	14
INDEA	

1. SCOPE.

1.1 <u>Scope</u>. This standard establishes the technical content requirements for the preparation of operator instructions for weapon systems and equipment Technical Manuals (TMs). These requirements are applicable for both paper and digital page-oriented TMs. Electronic delivery of the TMs is accomplished through the use of the Operator Instructions modular Document Type Definition (DTD). The DTD is available in a digital format. Refer to MIL-STD-40051 for information on obtaining this DTD. Operator instructions provide the operator/crew with data for operating the weapon system/equipment including location and use of controls and indicators, how to prepare the weapon system/equipment for use, and how to operate the weapon system/equipment under ordinary, unusual, and emergency conditions.

2. APPLICABLE DOCUMENTS.

The applicable documents in Section 2 of MIL-STD-40051 apply to this Part.

3. **DEFINITIONS.**

The definitions in Section 3 of MIL-STD-40051 apply to this Part.

4. **GENERAL REQUIREMENTS.**

- 4.1 <u>General</u>. Operator instructions shall be prepared for weapon systems, major equipment, components and applicable support and interface equipment. Operating instructions shall describe the operation authorized for the operator/crew. Procedures and supporting illustrations shall be prepared so that personnel can prepare the weapon system/equipment for operation, identify and locate operational controls and indicators, and operate the weapon system/equipment safely and efficiently in both normal and emergency conditions. This information shall be contained in work packages and become a part of an Operator Instructions Information chapter.
- 4.2 <u>Standard tables</u>. Various standard tables required are noted throughout the text of this standard in bold and in parentheses (i.e., (**standard table**)). The formats and table heading names of these standard tables shall have no deviations.
- 4.3 <u>Preparation of digital data for electronic delivery</u>. Technical manual data prepared in work package format and delivered digitally in accordance with this standard shall be SGML tagged and assembled using the modular Assembly DTD and Formatting Output Specification Instance (FOSI). The DTD and FOSI has been developed in accordance with MIL-PRF-28001 and ISO 8879. Refer to MIL-STD-40051 for information on obtaining or accessing the modular DTD and FOSI. SGML tags used in the modular DTD are noted throughout the text of this standard in bracketed, bold characters (i.e., <opim>) as a convenience for the TM author and to ensure that the tags are used correctly when developing a document instance.
- 4.3.1 <u>Use of the DTDs / FOSIs</u>. The modular DTDs referenced in this standard interpret the technical content and structure for the functional requirements contained in this standard and are mandatory for use. The modular FOSIs referenced herein interpret the style and format. As specified by the contracting activity, FOSIs or style sheets may be used to produce final reproducible paper copy for all TMs prepared in accordance with this standard.

- 4.4 <u>Content structure and format</u>. The examples provided at the rear of this Part are an accurate representation of the content structure and format requirements contained herein and shall be followed to permit the effective use of the modular DTD for Operator Instructions.
- 4.5 <u>Style and format</u>. Style and format requirements for the preparation of Department of Army TMs are contained in MIL-STD-40051-1; they are considered mandatory and are intended for compliance. Preferred general style and format requirements for Army TMs shall be provided by the procuring activity.
- 4.6 <u>Work package development</u>. Technical manual data developed in accordance with this standard shall be divided into individual, stand alone units of information work packages. A work package shall consist of descriptive, operational, maintenance, troubleshooting, support, or parts information for the weapon system or equipment.
- 4.7 <u>Safety devices and interlocks</u>. Information shall be prepared pertaining to the purpose and location of all safety devices and interlocks in conjunction with the pertinent procedures.
- 4.8 <u>Electrostatic Discharge (ESD)</u> sensitive parts. If the equipment contains ESD sensitive parts, components, or circuits, cautions and ESD labels shall be incorporated into the applicable tasks and procedures to ensure ESD sensitive parts are not damaged or degraded during handling or operation. Refer to MIL-STD-40051-1 for requirements on labeling ESD. Actions which could damage ESD sensitive parts, but which are not directly related to handling or operation of ESD sensitive parts, shall not be annotated with the ESD acronym, but shall be preceded by a caution statement.
- 4.9 <u>Nuclear hardness</u>. If the weapon system/equipment has nuclear survivability requirements (for example, over pressure and burst, thermal radiation, electromagnetic pulse, or transient radiation effects on electronics), cautions and Hardness-Critical Processes (HCP) labels shall be incorporated into the applicable tasks and procedures to ensure the hardness of the equipment is not degraded during handling or operation. Refer to MIL-STD-40051-1 for requirements on labeling with HCP. Actions which could degrade hardness, but which are not directly involved in establishing nuclear hardness, shall not be annotated with the acronym, but shall be preceded by a caution statement.
- 4.10 <u>Selective application and tailoring</u>. MIL-STD-40051 contains some requirements that may not be applicable to the preparation of all technical manuals. Selective application and tailoring of requirements contained in MIL-STD-40051 are the responsibility of the contracting activity and shall be accomplished through the use of Appendix A, Technical Manual Content Selection Matrixes, of MIL-STD-40051. The applicability of some requirements is also designated by one of the following statements: unless specified otherwise by the contracting activity; as/when specified by the contracting activity; or when specified by the procuring activity.

5. **DETAILED REQUIREMENTS.**

- 5.1 <u>Preparation of operator instructions</u>. Operator instructions shall be prepared as an Operator Instructions Information Chapter **<opim>**. This chapter shall be subdivided into individual work packages that provide the operator of the weapon system/equipment with descriptions and use of controls and indicators and operation of the weapon system/equipment under usual, unusual and emergency conditions. This information shall be divided into the following work packages.
 - a. Description and use of controls and indicators work package **<ctrlindwp>**.

- b. Operation under usual conditions work package(s) < opusualwp>.
- c. Operation under unusual conditions work package(s) < opunuwp>.

NOTE: In cases where operating instructions are divided by crew station assignment (or auxiliary equipment), work packages shall be developed to support each crew-served station.

The words **END OF OPERATING PROCEDURE**shall be placed below the last data item (i.e., text, illustration, etc.) in any work package containing procedures.

- 5.1.1 Description and use of controls and indicators work package **<ctrlindwp>**. Information shall be prepared for the description and use of all system or equipment controls and indicators. A description and use of controls **<contdesc>** and indicators **<inddesc>** shall be prepared for each equipment, assembly, or control panel having controls and indicators. Illustrations shall be prepared for all operator controls and indicators. Each control and indicator shall be clearly labelled as it appears on the equipment. Controls and indicators that are not labelled, such as the accelerator or brake pedals, shall be identified. The functional use of each control and indicator shall be explained. A table **<ctlindtab>** (**standard table**) or list may be used to explain the use of the controls and indicators. (Refer to figure 1.)
- 5.1.2 Operation under usual conditions work package **<opusualwp>**. Instructions to operate the weapon system/equipment and auxiliary equipment in all modes of operation shall be prepared. Any combination of control settings that will create a hazard to personnel or cause damage to equipment shall be preceded by a warning or caution. Instructions to ensure proper grounding of equipment shall be prepared. The operational tasks **<opertsk>** described in 5.1.2.1 through 5.1.2.8 shall be included, as applicable. (Refer to figure 2.)
- 5.1.2.1 <u>Initial setup information **wpinfo>**</u>. Information required by the user before starting a detailed operating procedure or maintenance task shall be listed at the beginning of each work package. This initial setup information is intended to provide the user with essential information to operate the equipment properly or perform the maintenance task correctly. Setup data from the following list shall be included as determined by the individual operational procedure or maintenance task being performed.
 - a. <u>Maintenance level <maintlvl></u>. The level of maintenance authorized to perform the maintenance contained in the work package (in accordance with the approved MAC) shall be stated. This shall be included for operator or crew, unit, AVUM, direct support, general support, AVIM, and depot levels of maintenance, as applicable. For example,

Maintenance Level

Unit

b. <u>Applicable configurations <appconfig></u>. When the work package does not apply to all configurations of the weapon system/equipment, the applicable configurations <name> covered by the work package shall be listed. Omit this requirement if the same tasks/procedures apply to all configurations. (If certain configurations require different tasks/procedures, separate work packages shall be prepared.) For example,

Applicable Configurations

Serial Numbers 12345 through 12399

c. <u>Test equipment <testeqp></u>. All test equipment required to perform the procedure shall be listed by name <name> and part partno> or model number <modelno> designation if this information is not contained in an overall list elsewhere in the TM. If such a list exists, refer to it by name <name>, item number, and work package number <simref> instead of repeating the information throughout the TM. For example,

Test Equipment

Multimeter (Item 4, WP 0108 00) Oscilloscope (13057)

d. Tools and special tools <tools>. The tool kit (box) assigned to the mechanic (on a 1-permechanic-by-MOS basis) to be used in maintenance of a particular equipment shall be listed by name <name>, tool kit number (<partno> or <nsn>), supply catalog (SC) <sc>, or TM number <tmno> if this information is not included in the Tool Identification List work package (-20/AVUM and above only) contained in the TM. If such a list exists, refer to it by name <name>, item number and work package number <simref> instead of repeating the information throughout the TM. No tool in the kit shall be further identified. Other tools required for performance of all tasks for the maintenance levels covered in the work package shall also be identified in the initial setup and shall be referenced to the Tool Identification List work package (-20/AVUM and above only). "Other tools" includes tools which are part of/components of shop sets authorized to sections/teams; tools authorized by RPSTL and CTA-50-970; special and fabricated tools; and items of TMDE. For example,

Tools and Special Tools

Fixed Open End Wrench Set (Item 47, WP 0110 00) Screw Threading Set (SC number) Vehicle Tool Kit (407425)

e. <u>Materials/parts <mtrlpart></u>. All expendable items and support materials shall be listed <name>. The item number and supporting information work package <simref> which lists these items shall be given. Mandatory replacement parts shall be listed by name <name> (and part number <partno>, if any). The number, quantity <qty>, or size necessary to complete the task shall be listed, when applicable. When a mandatory replacement parts work package (-20/AVUM and above only) exists, it shall be referred to in lieu of the part number. For example,

Materials/Parts

Grease (Item 5, WP 0112 00) Wiping Rags (Item 38, WP 0112 00) Range Lock (P/N 8675309) Range Lock Flange Kit (P/N 8675310)

f. <u>Personnel required < personnel </u>. Personnel < name > and the number of personnel < qty > shall be identified if the task requires more than one. The Military Occupational Specialty (MOS) designation < nameid > is not necessary, but it may be included. For example,

Personnel Required

Artillery Mechanic 68M10 (1) Artillery Mechanic 66J30 (1) g. <u>References < ref></u>. Other work packages, TMs, and other sources (< extref>/< xref>/< simref>) that are needed to complete the maintenance tasks shall be listed here. Only references not listed in equipment conditions shall be listed. For example,

References

TM 9-1015-252-20&P WP 0100 00

h. <u>Equipment conditions <eqpconds></u>. Any special equipment conditions required before the procedure can be started shall be listed here and cross-referenced to the appropriate source (<extref> or <xref>) for setting up the condition <condition>. For example,

Equipment Condition

Firing mechanism removed (WP 0010 00)

i <u>Special environmental conditions (specenv)</u>. Any special environmental conditions (such as ventilation, lighting, or temperature) **<condition>** that are required shall be listed here. The reason that such conditions are needed shall be explained. For example,

Special Environmental Condition

Darkened area required for testing lights.

j. <u>Drawings required <dwgreq></u>. All drawings (which are not included in the work package) required to complete the maintenance tasks shall be listed here. Drawings shall be listed by title <dwgname> and drawing number <dwgno>. For example,

Drawings Required

Power Supply Schematic (132E470092)

- 5.1.2.2 <u>Siting requirements <site></u>. Siting instructions peculiar to the equipment shall be prepared. Operational features shall be considered, such as the following.
 - a. Location.
 - b. Proximity to power sources.
 - c. Effective ranges.
 - d. Terrain requirements to avoid screening reflections, ground clutter, and other poor operational conditions due to terrain.
 - e. Technical requirements.
 - f. Shelter locations.
 - g. Compensating for adverse siting conditions.
 - h. When the equipment contains large components, such as towers and antennas, that require orientation to a baseline during siting.
 - i. Mobile equipment oriented during installation.

- 5.1.2.3 <u>Shelter requirements <shelter></u>. For equipment normally housed in a permanent or semipermanent shelter (other than a military truck, van, or transportable shelter) during use, the following information shall be prepared.
 - a. Amount of floor, wall, and height space required.
 - b. A plan for a typical layout.
 - c. Required weight capacity of the building floor.
 - d. Dimensions required for installed equipment.
 - e. Total weight that the floor must support and the area in square feet over which the total weight will be distributed.
 - f. Environmental conditions (e.g., venting).
 - g. Power requirements.
 - h. Unusual requirements specific to equipment, such as air-conditioning.
 - i. Architectural and engineering data on beam sizes, lengths, bending moments, and required supports shall not be included.
- 5.1.2.4 Assembly and preparation for use **<assem>**.
 - a. Procedures shall be prepared for unpacking, assembly, and installation. When the equipment is shipped or delivered in specially designed containers, unpacking instructions shall be prepared. If the containers are to be used again, kept for future use, turned in to supply, or if any special disposition is required, the necessary procedures shall be prepared. Assembly and installation procedures shall be prepared when needed. These instructions shall be supported by illustrations. As applicable, power requirements, connections, and initial control settings needed for installation purposes shall be included.
 - b. For security measures for electronic data, instructions shall be prepared for handling, loading, scrubbing, overwriting, or unloading classified electronic data under usual conditions. Instructions shall meet the requirements as they pertain to automation security.
- 5.1.2.5 <u>Initial adjustments, before use, and self-test **<initial>**</u>. Procedures shall be prepared for any routine checks, self-test, or adjustments that the operator must make before putting the equipment in operation.
- 5.1.2.6 <u>Operating procedures **<oper>**</u>. The following operating instructions shall be prepared, as applicable.
 - a. All steps necessary to bring the equipment from OFF through STANDBY condition to full operation, including all necessary warnings and cautions.
 - b. Procedures for each mode of operation, e.g., manual, automatic, local, remote, etc. The use and relative advantage of each mode shall also be described.

- c. Description of the equipment anti-jamming and interference reduction features, the advantage of each feature, and the operating procedures to be followed. Supporting illustrations (such as indicator displays, waveforms, etc.) shall be included which provide typical observations of jamming and interference for evaluation by the operator.
- d. Operator turn-off procedures, including all steps necessary to bring the equipment from full operation through STANDBY to OFF condition.
- e. Procedures covering operation of the equipment during emergency conditions (control failure, air failure, lube oil failure, loss of cooling water, etc.). Emergency operating instructions shall be included. Warning or caution to return the equipment to proper operation when the emergency is over shall also be included.
- f. Procedures to turn the equipment off during an emergency (fire, water, smoke, hazard to personnel, loss of coolant, normal power, etc.).
- g. Operating instructions for misfire, hangfire, and other procedures applicable to ammunition.
- h. Operating procedures explaining how the equipment is operated in conjunction with auxiliary equipment or how it operates when integrated with other equipment.
- 5.1.2.6.1 <u>Operating procedure considerations</u>. The following considerations should be taken into account when preparing operating procedures.
 - a. Initial safety requirements (actions, inspections, and emergency turn-off procedures).
 - b. If a particular operating procedure or step is assigned to a specific crew-served position (e.g., gunner), the assignment must be indicated.
 - c. Connection of any accessory equipment not permanently connected.
 - d. Instructions for obtaining or confirming the presence of all critical inputs such as power, coolant, air, signal, air-conditioning, etc. Specific values for critical inputs (power, coolant, air, etc.) shall also be included.
 - e. Procedures for setting controls and making adjustments which must be accomplished by the operator prior to equipment turn-on.
 - f. Procedures for determining operational readiness and the acceptable indications expected from built-in indicators, such as meters, lamps, gages, displays, and recorder readouts.
 - g. Milestones in the operational status of the equipment, indicated by brief statements, such as "The generator is now in STANDBY."
 - h. Visual or audible observations which occur as a result of an operator action, such as boom lowering, sweep rotation, blower motor running, etc.
- 5.1.2.6.2 <u>Summary operating procedures</u>. Procedural steps may be preceded by a summary. If the summary is used, it shall be written entirely in capital letters.

- 5.1.2.6.3 <u>Decals and instruction plates **(instructplt)**</u>. Decals and operating instruction plates located on the equipment, which are essential for operation, shall be clearly illustrated, so that all information is legible. Related warning and caution decals and plates shall be included. An illustration(s) shall be prepared to show the location of all applicable decals and plates.
- 5.1.2.7 Operating auxiliary equipment **<operaux>**. If applicable, procedures shall be prepared for putting the auxiliary equipment into operation, operating it, and putting it in standby or shutdown status. If these procedures are published in another TM covering the auxiliary equipment, reference shall be made to that TM in accordance with the requirements of MIL-STD-40051-1.
- 5.1.2.8 <u>Preparation for movement prepmove>. Preparation for movement procedures shall be prepared if the equipment is designed for movement and it can be readied for movement by the operator. Procedures shall be prepared for actions such as disassembly, folding, and telescoping. Illustrations shall be prepared, as required, to support the text. This information shall not duplicate the "assembly and preparation for use" requirements contained in 5.1.2.4.</u>
- 5.1.3 Operation under unusual conditions work package **<opunuwp>**. Instructions shall be prepared for operation under unusual conditions. Preventive or protective measures to be taken beyond the operator's capabilities shall be identified. Instructions to ensure proper grounding of equipment shall be prepared. For security measures for electronic data, instructions shall be prepared for handling, loading, purging, overwriting, or unloading classified electronic data under unusual conditions. Instructions shall meet current security regulations as they pertain to automation security. The operational tasks **<opunutsk>** described in 5.1.3.6 shall be included, as applicable. (Refer to figure 3.)
- 5.1.3.1 Initial setup information **<wpinfo>**. Initial setup information requirements are provided in 5.1.2.1.
- 5.1.3.2 <u>Unusual environment / weather **<unusualenv>**</u>. Procedures shall be prepared for operation under conditions of extreme moist heat, extreme dry heat, extreme cold, salt air, sea spray, dust storms, sand storms, high altitudes, snow, mud, and other similar conditions. Ranges of environmental/weather operating conditions considered for the system addressed shall be defined.
- 5.1.3.3 <u>Fording and swimming **<fording>**</u>. If applicable, procedures for fording and swimming the equipment, shall be provided.
- 5.1.3.4 <u>Interim Nuclear, Biological, and Chemical (NBC)</u> decontamination procedures **<decon>**. As applicable and specified by the contracting activity, interim general NBC decontamination procedures to be performed until NBC decontamination facilities are available shall be prepared. Other decontamination TMs shall be referenced only when necessary.
- 5.1.3.5 <u>Jamming and Electronic Countermeasures (ECM) procedures **<ecm>**</u>. As applicable, procedures shall be prepared for operation of the equipment in an ECM environment through transmitted and reflected deception signals and through transmitted and reflected jamming.
- 5.1.3.6 <u>Emergency procedures <emergency></u>. Procedures shall be prepared for temporarily adapting the equipment and the operating procedures to meet the reduction of power, partial failure, failure of a portion of the equipment, or similar conditions when continued equipment use is required.

6. **NOTES**.

The notes in section 6 of MIL-STD-40051 apply to this Part.

TM-6625-3178-14	
TRANSPORTABLE ELECTRONICS SHOP CONTROLS	0202 00
AND INDICATORS	

GENERAL

The following paragraphs contain illustrations that show the location of each control and indicator for operation of the AN/TSM-191(*). Each control and indicator is clearly labeled as it appears on the equipment. Find numbers on the illustration are keyed to the tabular listing which contains the name, based on the panel markings, and at the functional description of each control and indicator.

POWER DISTRIBUTION PANEL CONTROLS AND INDICATORS

Table 1 describes the controls and indicators for the power distribution panel.

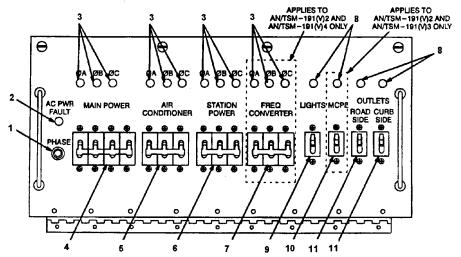


Table 1. Power Distribution Panel Controls and Indicators.

KEY	CONTROL OR INDICATOR	FUNCTION
1	PHASE indicator	When lit, indicates power applied to the input side of the MAIN POWER circuit breaker has the correct phase sequence of A-B-C.
2	AC PWR FAULT indicator	When lit, indicates power is applied to the input side of the MAIN POWER circuit breaker and the MAIN POWER circuit is the OFF (down) position.
3	ØA, ØB, ØC indicators	When lit, indicates circuit breaker; either MAIN POWER, AIR COND-ITIONER, STATION POWER, or FREQ CONVERTER (applies to AN/TSM-191(V)2 and AN/TSM-191(V)4 is the ON (up) position and power applied to the input side of the breaker is now applied to the outputs of the breaker.
	ļ	0202 00-1

FIGURE 1. Example of an operator's controls and indicators work package.

TM-6625-3178-14

TRANSPORTABLE ELECTRONIC SHOP OPERATION UNDER USUAL CONDITIONS

0304 00

INITIAL SETUP:

Maintenance Level

Unit

Personnel Required Two

GENERAL

The equipment contained within this test facility is normally shipped assembled. The assembly paragraph provides the data and procedures for the steps to be taken when AN/TSM-191(*) is emplaced. The items included are ladder installation, ground rod installation, primary power connection and air conditioner drain plug removal.

SITING REQUIREMENTS

WARNING

The power source must be placed at least 75 feet from the test facility.

CAUTION

If the outside ambient temperature is expected to be 90 degrees or above, position the shelter with roadside shaded, if possible, to minimize the effect of direct sunlight.

- The site requirements for emplacement of the AN/TSM-191 (*) consist of a three -phase 416 wye/ 240 volt ac, 400 Hz (applies to the AN/TSM-191 (V) 2 and AN/TSM-191 (V) 4 only or threephase 208 wye/120 volts ac, 60 HZ (applies to the AN/TSM-191(V) 3 only) primary power source.
- 2. The AN/TSM-191(*) should be placed on a minimum of 15 by 25 feet of firm level ground with a six percent slope or less.
- 3. The power source should be placed at least 75 feet from the facility.

PREPARATION FOR USE AND ASSEMBLY

Ladder Installation

WARNING

The ladder must be installed to provide access to the AN/TSM-191 (*) Ladder weighs 75 lbs. Two people are required to lift the ladder.

1. Remove ladder (1) from storage brackets on exterior entry end of shelter.

0304 00-1

FIGURE 2. Example of an operation under usual conditions work package.

TM-6625-3178-14

TRANSPORTABLE ELECTRONIC SHOP OPERATION **UNDER USUAL CONDITIONS-Continued**

0304 00

PREPARATION FOR USE AND ASSEMBLY-Continued

- 2. Remove hooks (5) from retainer slots on both sides of tail gate (4).
- 3. Grasp top of tail gate and pull it back. Do not allow tail gate to drop.
- 4. Replace hooks in slots of tail gate to secure tail gate in horizontal position.
- 5. Pull out retaining pins and remove railings (2) from ladder.

NOTE

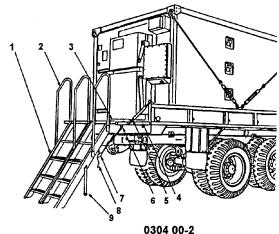
Ladder should be positioned for use while strapped in the folded position.

6. Slide U-brackets (3) at top end of ladder over edge of tail gate.

NOTE

When ladder is unfolded, do not seperate. Ensure hinge pins are engaged.

- 7. Loosen straps (9) and unfold ladder.
- 8. To release lanyards (7) from the stored position, pull up on center locking pin and pull cord through.
- 9. Hook retaining brackets (6) on bottom of tail gate, pull free end of cord (8) and push down on center locking pin to secure ladder in position.
- 10. Install railing (2) on ladder.



END OF TASK

FIGURE 2. Example of an operation under usual conditions work package - Continued.

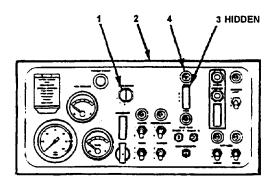
TM 3-6665-339-10

NBCRS FOX M93A1 OPERATION UNDER UNUSUAL CONDITIONS

0426 00

OPERATE SWIM CONTROLS (AMPHIBIOUS OPERATIONS)

1. Set MAIN SWITCH (1) on driver's right instrument panel (2) to position 2.



- 2. Operate bilge pumps (see WP 0386 00).
- 3. Operate differential locks (see WP 0394 00).

WARNING

Personnel can be injured by moving propellers. Before turning on amphibious drive, make sure personnel are not closer than 16.4 feet (5m) from propellers.

CAUTION

Before switching on amphibious drive, make sure propellers and drive shafts are not blocked by dirt or frozen mud. Clean to advoid damage to equipment.

Amphibious drive should only be switched on when engine is idling to prevent damage to equipment.

4. Start engine (see WP 0167 00) and run at idle. Open cover and pull out and move SWIM/FREE switch (3) to position 2. Check that SWIM indicator light (4) is lit and have crewmember check that both propellers are operating. If not, do troubleshooting (see WP 0562 00).

NOTE

Swim control handle is stowed behind commander's seat.

0426 00-1

FIGURE 3. Example of an operation under unusual conditions work package.

TM 3-6665-339-10 0426 00 NBCRS FOX M93A1 OPERATION UNDER UNUSUAL CONDITIONS - Continued **OPERATE SWIM CONTROLS (AMPHIBIOUS OPERATIONS) - Continued** 5. Move speed rocker switch (5) to position 1. SLOW indicator light (6) should be lit. If not, do troubleshooting (see WP 0568 00). 6. Move speed indicator switch (5) to position 2. FAST indicator light (7) should be lit. If not, do troubleshooting (see WP 0568 00). 0000000 NOTE Engine output power must be provided by driver while commander operates swim controls. Propeller speed is controlled by the engine speed. Depressing right or left steering switch to first position will traverse propellers at a slow rate. Depressing right or left steering switch to second position will traverse propellers at a high rate. Amphibious direction indicator will rotate in direction of steering switch that is depressed. This will indicate direction vechile is heading. 7. Depress right or left hand steering switch (8, 9) as needed to position amphibious direction indicator (10) to 0. This will allow for straight-ahead travel. Have crewmember check that propellers are in the proper position. If not, notify unit maintenance. 8. Operate trim vane (see WP 0331 00).

FIGURE 3. Example of an operation under unusual conditions work package - Continued.

0426 00-2

END OF TASK

INDEX

	<u>PARAGRAPH</u>	<u>PAGE</u>
Applicable documents		1 6
Content structure and format	4.4	2
DTDs, use of Decals and instruction plates Definitions Description and use of controls and indicators work package Detailed requirements Digital data, preparation for electronic delivery	5.1.2.6.3 3. 5.1.1 5.	1 8 1 3 2
Electrostatic Discharge (ESD) sensitive parts	4.8	2 8
FOSIs, use of		1 8
General requirements	4.	1
Initial adjustments, before use, and self test		6 3 8
Interim Nuclear, Biological, and Chemical (NBC) decontamination procedures	5.1.3.4	8
Jamming and electronic countermeasures procedures	5.1.3.5	8
Notes		9 2
Operating procedures Auxiliary equipment Considerations Preparation for movement Summary	5.1.2.7 5.1.2.6.1 5.1.2.8 5.1.2.6.2	6 8 7 8 7
Operation under unusual conditions work package	5.1.3.6 5.1.3.3	8 8 8
procedures	5.1.3.5	8 8 8

INDEX

	<u>PARAGRAPH</u>	<u>PAGE</u>
Operation under usual conditions work package	5.1.2	3
Assembly and preparation for use		6
Initial adjustments, before use, and self-test	5.1.2.5	6
Initial setup information		3
Operating auxiliary equipment		8
Operating procedures		6
Preparation for movement		8
Shelter requirements		6
Siting requirements	5.1.2.2	5
Operator instructions, preparation of	5.1	2
Preparation for movement	5.1.2.8	8
Safety devices and interlocks	4.7	2
Scope	1.1	1
Shelter requirements	5.1.2.3	6
Siting requirements	5.1.2.2	5
Style and format	4.5	2
Unusual environment/weather	5.1.3.2	8
Work package		
Description and use of controls and indicators	5.1.1	3
Development	4.6	2
Operation under unusual conditions	5.1.3	8
Operation under usual conditions	5.1.2	3